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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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12/05/2001

John R. Schneider

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7590

09/19/2006

PPG INDUSTRIES, INC.  
Intellectual Property Department  
One PPG Place  
Pittsburgh, PA 15272

EXAMINER

GORR, RACHEL F

ART UNIT

PAPER NUMBER

1711

DATE MAILED: 09/19/2006

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/007,149  
Filing Date: December 05, 2001  
Appellant(s): SCHNEIDER ET AL.

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Diane R. Meyers  
For Appellant

**EXAMINER'S ANSWER**

**MAILED**  
SEP 19 2006  
**GROUP 1700**

This is in response to the appeal brief filed July 11, 2008 appealing from the Office action mailed February 7, 2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

The following is a listing of the evidence (e.g., patents, publications, Official Notice, and admitted prior art) relied upon in the rejection of claims under appeal.

US 6,362,267                      HARASHIMA                      3-2002

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 6, 10-12, 15-17, 19-24, 26-40, 42-45 and 50-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christie.

The application had been examined and twice rejected over Christie with regard to an acrylic film forming resin and alumina particles as the elected species for the powder composition of claim one. The appeal brief and claims are not limited to these species, and, therefore, this examiner's answer isn't limited to those species.

Christie discloses powder coatings (col. 1, line 61; example 6) comprising film forming resins (acrylic, polyester, polyurethane)(col. 2, lines 14-15) and alumina having particle sizes of 3-250 microns (bottom col. 3 – top col. 4) in an amount of 0.05-5 wt. % (col. 3, line 8). He adds alumina to improve abrasion resistance (abstract). He discloses crosslinking the film forming resin by chemical means (top col. 2), and, in example 6, he crosslinks a carboxylated polyester resin with an epoxy group containing curing agent. He discloses calcined unground alumina, calcined ground alumina and tabular alumina (col. 1, lines 50-52). In col. 2, line 34, he teaches aluminum hydroxide filler, which is uncalcined alumina, in amounts of 50-300 wt. %. The Mohs' hardness of alumina is 8 and the refractive index is 1.764, both inherent properties. Christie teaches that the refractive index of synthetic resins and aluminum trihydroxide is 1.50-1.57(col. 2, line 35). Therefore, the refractive index difference between Christie's resins and alumina and aluminum hydroxide would be less than one. In col. 3, line 44, Christie

discloses median crystallite sizes of at least "about" 5.5 microns for calcined unground alumina, which would overlap with median crystallite sizes of less than 5.5 microns. Christie mainly differs from the claims by using a broader range of particle sizes than the specified range of 1-15 microns.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to choose a particle size of less than nine microns because Christie teaches (col. 3, line 50) that a maximum size of not greater than nine microns is best for gloss retention properties.

Claims 41 and 59-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christie in view of Harashima.

Christie shows the invention of the claims (see above) but differs from these claims by not specifying that the alumina be extruded with all the powder coating ingredients, but shows adding alumina to the powder coating after extrusion (col. 9, lines 50-58).

Harashima discloses making powder coatings in which all the ingredients are extruded together or in which the filler can be added later (col. 3, lines 17-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to extrude the alumina with the resin in the powder coating composition of Christie because Harashima teaches this for uniform mixing.

#### **(10) Response to Argument**

**The appellant argues that Christie doesn't disclose or suggest powder compositions. This was addressed above.**

**The appellant argues that Christie doesn't specify that the film forming resin and particles have refractive indices differing by less than one. The refractive index of the resin, alumina and aluminum hydroxide differ by less than one.**

**Claim 10: The appellant argues that Christie doesn't disclose uncalcined alumina. The aluminum trihydroxide filler of Christie is the same as uncalcined alumina (col. 3, lines 23-25), and Christie shows "superfine" aluminum hydroxide in example 5.**

**Claim 11: The appellant argues that Christie teaches away from alumina crystallite sizes less than 5.5 microns. Christie teaches "at least about 5.5 microns", which overlaps with the claim.**

**Claims 12, 21, 51, 52, 55-58: The appellant argues that Christie teaches away from particle sizes of less than three microns. Christie teaches particle sizes of 3-250 microns. Three microns and less than three microns are about the same.**

**Claims 26-28: The appellant argues that Christie is silent on the shape of the particles – spherical, platy, nonuniform. Tabular alumina is platy. The ground alumina would comprise a mixture of spherical and nonuniform.**

**Claim 33: The appellant argues that Christie teaches away from greater than five weight percent particles. Christie's range of 0.05-5 wt. % overlaps with**

**greater than five percent. Further, Christie uses more than five weight percent aluminum trihydroxide (uncalcined alumina).**

**Claim 36: The appellant argues that Christie doesn't disclose polymeric substrates and shows only steel in example 6. This substrate is only an example and doesn't so limit Christie. It would have been obvious to use any usual coating substrate.**

**Claims 37, 40: The appellant argues that Christie doesn't show multi-layered coatings. Multi-layers of Christie's coating would be the same as a single layer.**

**Claim 38: The appellant argues that Christie is silent on the thickness of his coating layers. The thicknesses specified in the claims are usual coating thicknesses.**

**Claim 39: The appellant repeats the argument that Christie doesn't teach powder coatings of substrates to improve mar resistance. This has already been addressed.**

**Claims 42-44: The appellant argues that Christie doesn't disclose the improved gloss reduction properties of the claims. These properties would be inherent to coatings having particle sizes less than nine microns, per Christie's teaching.**

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**With respect to the rejection over Christie in view of Harashima, the appellant argues that Christie doesn't disclose powder coatings and that Harashima doesn't overcome this deficiency. Christie shows powder coatings.**



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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Rachel Gorr

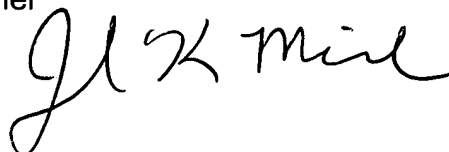
  
RACHEL GORR  
PRIMARY EXAMINER

Conferees:

James Seidleck



Jennifer Kolb-Michener



**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.